

REMARKS

Claims 1-7 are now pending in the application. Claim 8 is cancelled. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

Applicants' representatives thank the Examiner for the courtesies extended during the telephone conference of September 7, 2006. During the conference, the Examiner indicated that the current outstanding Office Action was final, that prosecution was closed, and that the Examiner was not able to participate in an interview or discuss the merits of the current outstanding Office Action or proposed claim amendments. Applicants respectfully note that MPEP § 713.09 permits one interview after final rejection. Applicants further note that the current Amendment is accompanied by a Request for Continued Examination. Therefore, Applicants' representatives request an interview with the Examiner to discuss the current outstanding Office Action and present Amendment and will contact the Examiner to make arrangements for such subsequent to filing of the present Amendment.

REJECTION UNDER 35 U.S.C. § 102

Claims 1-8 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Maydan et al. (U.S. Pat. No. 5,855,681 A). With respect to claim 8, the rejection is rendered moot by cancellation. With respect to claims 1-7, the rejection is respectfully traversed.

Claim 1 recites a manufacturing apparatus for manufacturing an intermediate product. The manufacturing apparatus comprises a plurality of process modules, an

inter-process carrying means, and a plurality of loaders. The plurality of process modules each perform a plurality of processes. The inter-process carrying means carry a container between the plurality of process modules. The containers are capable of storing a plurality of intermediate products. The inter-process carrying means include at least one of an automatic carrying robot and an automatic carrying vehicle. Each loader is capable of acquiring the container from the inter-process carrying means, removing the intermediate products stored in the container, and transferring the intermediate products to one of the process modules in a single product state. Each process module includes an intra-process carrying conveyor and a plurality of processing means. The intra-process carrying conveyor is arranged radially from the inter-process carrying means and carries the intermediate products within the process module in the single product state in a carrying direction. The intra-process carrying conveyor has a first side, which carries the intermediate products away from the inter-process carrying means, connected to a second side, which carries the intermediate products towards the inter-process carrying means. Each processing means has a robot for acquiring and returning the intermediate products to the intra-process carrying means, and a mini-buffer for temporarily storing the intermediate products. The plurality of processing means are arranged along the first side and the second side of the intra-process carrying conveyor at locations corresponding to an order of processes to be performed on the intermediate products, without arranging a plurality of processing means for performing the same kinds of processes on the intermediate products in a group. A series of processes to be performed on the intermediate products is completed during a single circulation of the intermediate products on the intra-process conveyor along the first side and the second side of the intra-process carrying conveyor. After completion of the series of processes, the intermediate products are loaded into the container and returned to the inter-process

carrying means. Maydan et al. does not teach or suggest the manufacturing apparatus recited by claim 1.

Maydan et al. describes a cassette-to-cassette vacuum processing system which processes wafers. Maydan et al. Col. 4, Lines 24-29. In Maydan et al., wafers are introduced to the system with a loadlock chamber and processed in one or more processing chambers. Maydan et al., Col. 4, Lines 29-37. Maydan et al. is silent as to a manufacturing apparatus with both inter-process carrying means and an intra-process carrying conveyor. Claim 1 recites a plurality of process modules, an inter-process carrying means for carrying a container between the process modules, and an intra-process carrying conveyor included with each process module. Maydan et al. does not teach or suggest the manufacturing apparatus recited by claim 1.

Further, Maydan et al. is silent as to an inter-process carrying means including at least one of an automatic carrying robot and an automatic carrying vehicle. Maydan et al. is also silent as to a plurality of loaders, each loader being capable of acquiring a container from the inter-process carrying means, removing the intermediate products stored in the container, and transferring the intermediate products to one of the process modules in a single product state.

Further, Maydan et al. does not teach or suggest a position of an intra-process carrying conveyor, or a location of process modules. Specifically, Maydan et al. is silent as to an intra-process carrying conveyor arranged radially from the inter-process carrying means. Maydan et al. is also silent as to an intra-process carrying conveyor having a first side, which carries intermediate products away from inter-process carrying means, connected to a second side, which carries the intermediate products towards the inter-process carrying means. Maydan et al. is also silent as to a plurality of processing means each having a robot for acquiring and returning intermediate products to an intra-

process carrying means, and a mini-buffer for temporarily storing the intermediate products.

Further, Maydan et al. does not teach or suggest a plurality of processing means arranged along the first side and the second side of the intra-process carrying conveyor at locations corresponding to an order of processes to be performed on the intermediate products, without arranging a plurality of processing means for performing the same kinds of processes on the intermediate products in a group. Maydan et al. also does not teach or suggest that a series of processes to be performed on the intermediate products is completed during a single circulation of the intermediate products on the intra-process conveyor along the first side and the second side of the intra-process carrying conveyor. Maydan et al. also does not teach or suggest that after completion of the series of processes, the intermediate products are loaded into the container and returned to the inter-process carrying means.

For these reasons, Maydan et al. does not teach or suggest each and every claim limitation of claim 1. With regard to claims 2-6, Applicants notes that each either directly or indirectly depends from claim 1, which defines over the prior art as discussed above. Therefore, claims 2-6, also define over the prior art. Reconsideration and withdrawal of these rejections are respectfully requested.

Claim 7 recites a manufacturing method of manufacturing an intermediate product via process modules, each performing a plurality of processes. The method comprises an inter-process carrying step, a loading step, an intra-process carrying step, and a processing step. The inter-process carrying step includes carrying a container between process modules with inter-process carrying means that include at least one of an automatic carrying robot and an automatic carrying vehicle, the container being capable

of storing a plurality of intermediate products therein. The loading step includes acquiring the container, removing the intermediate products stored in the container, and transferring the intermediate products to one of the process modules in a single product state. The intra-process carrying step includes carrying the intermediate products within each process module on an intra-process conveyor in the single product state in a carrying direction, the intra-process conveyor being arranged radially from the inter-process carrying means and having a first side, which carries the intermediate products away from the inter-process carrying means, connected to a second side, which carries the intermediate products towards the inter-process carrying carrying means. The processing step includes performing the plurality of processes by a plurality of processing means, respectively, in each process module. The plurality of processing means are arranged along the first side and the second side of the intra-process conveyor at locations corresponding to an order of processes to be performed on the intermediate products, without arranging the plurality of processing means for performing the same kinds of processes on the intermediate products in a group. A series of processes to be performed on the intermediate products is completed during a single circulation of the intermediate products on the intra-process conveyor during the intra-process carrying step. After completion of the series of processes, the intermediate products are loaded into the container and carried to another process module.

Similar limitations are recited by claim 1, discussed above. For at least the above reasons, claim 7 defines over the prior art. Reconsideration and withdrawal of the rejection are respectfully requested.

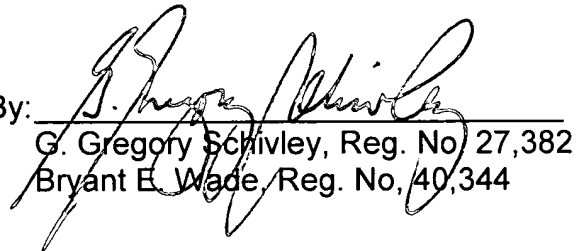
CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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